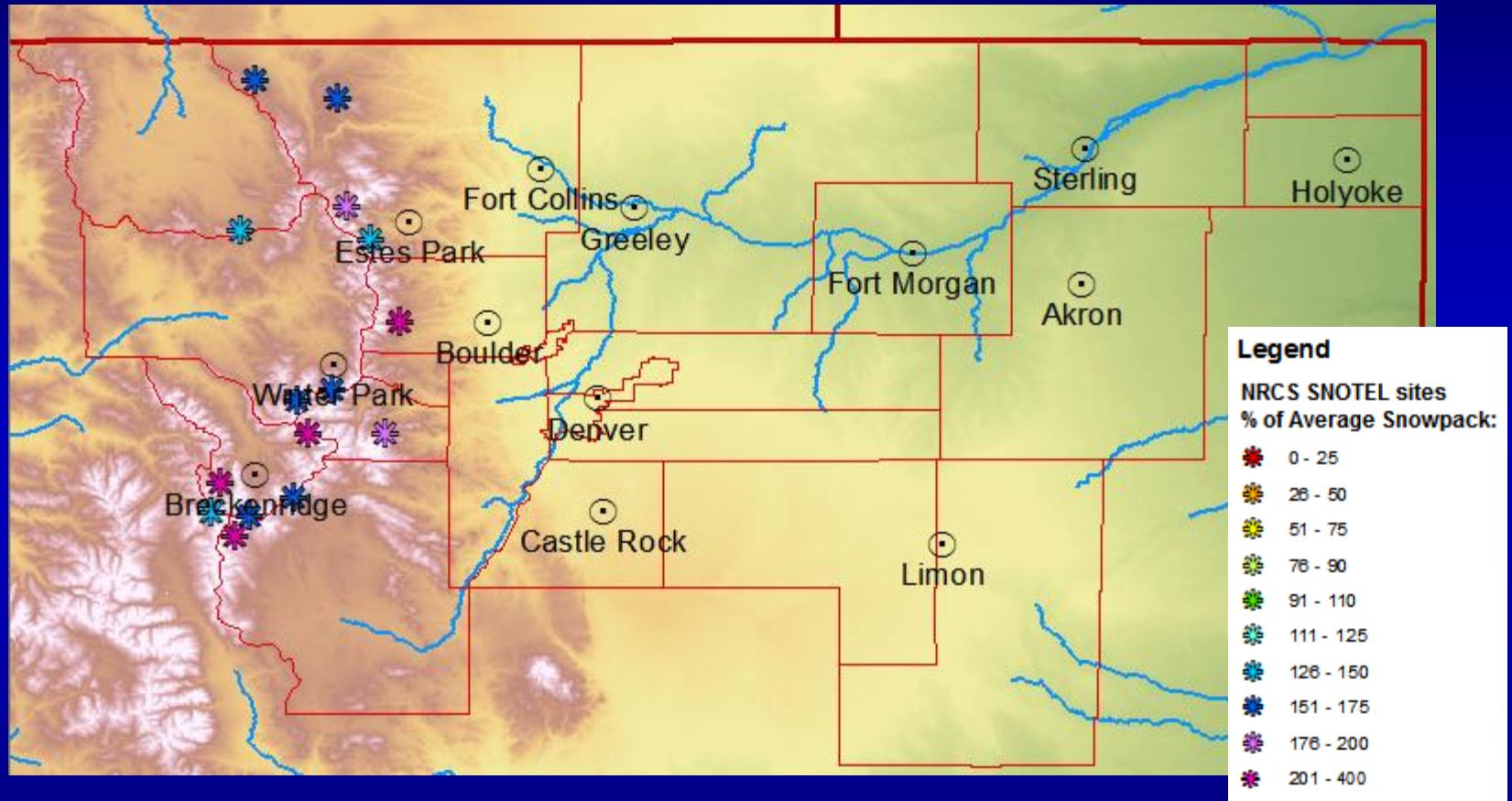
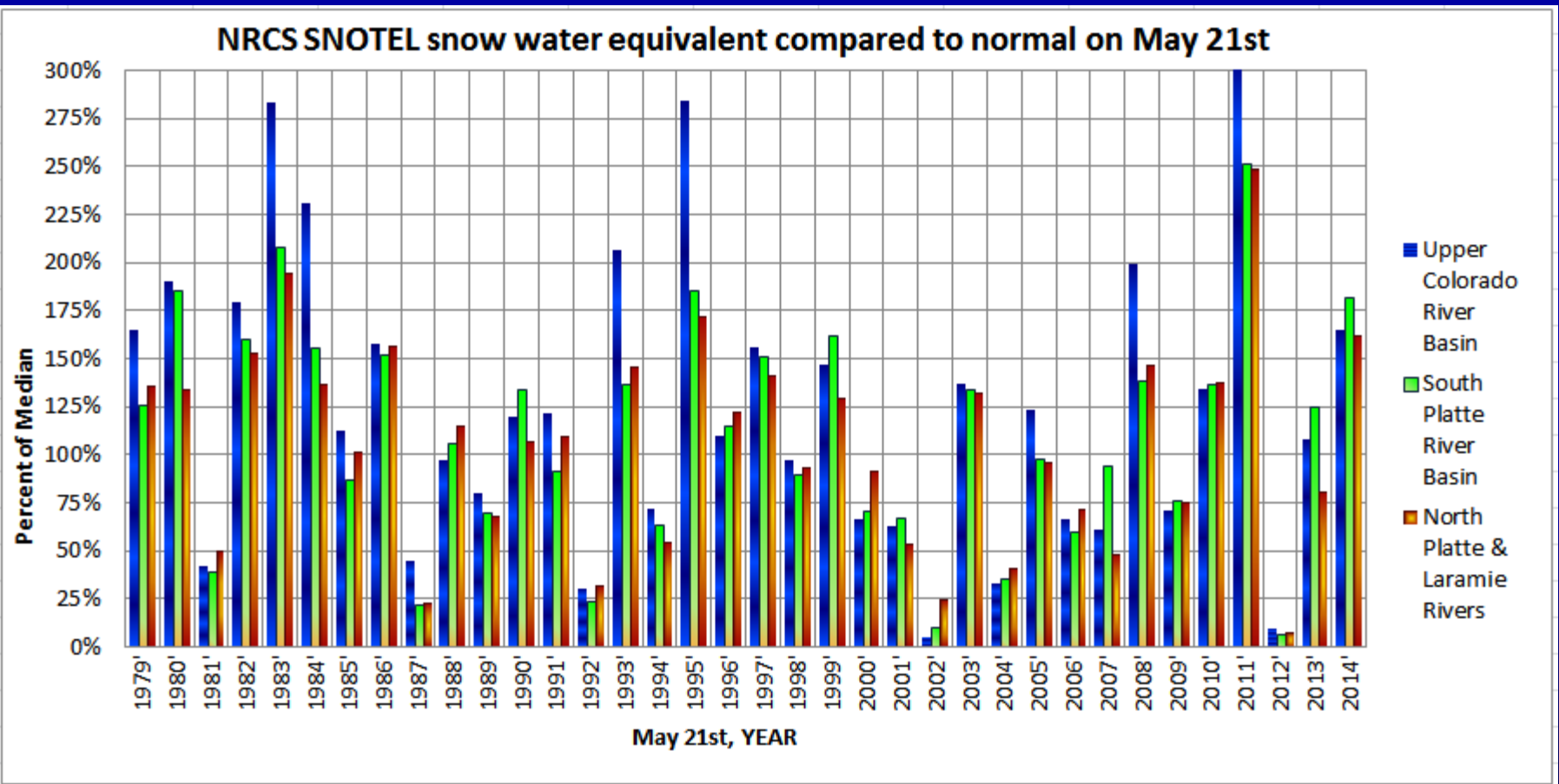


# Mountain Snowpack in North Central Colorado

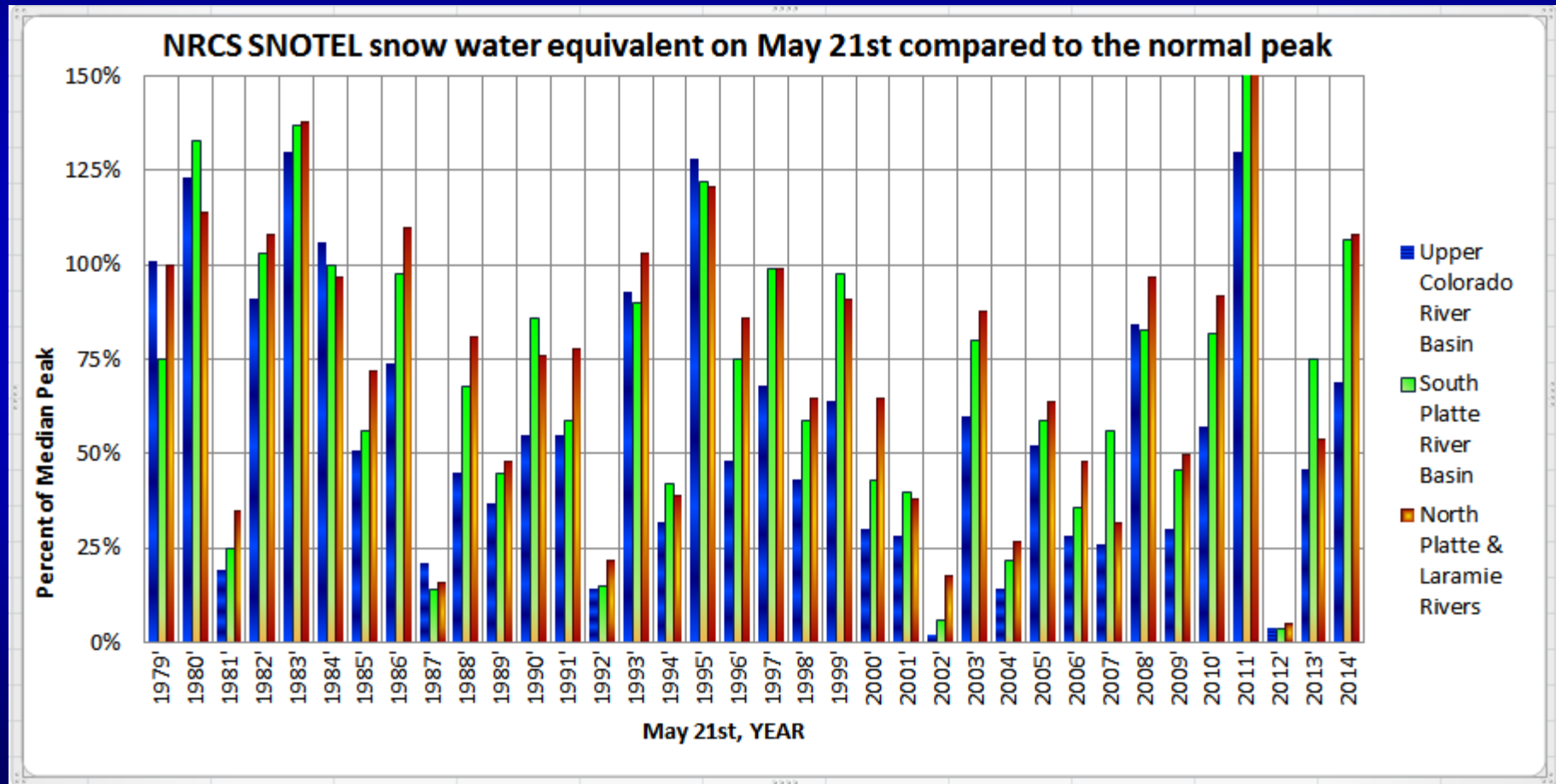
May 21<sup>st</sup>, 2014



The 2014 percent of normal basin snowpack remains high. By May 21<sup>st</sup> the basin percent of normal snowpack graph (below) has extreme data for many years.. This in part is due to late and early spring snow melt some years, and numerous SNOTEL sites at lower elevations typically already melted out. Therefore, another graph has been added comparing May 21<sup>st</sup> of each year to the median peak snowpack.

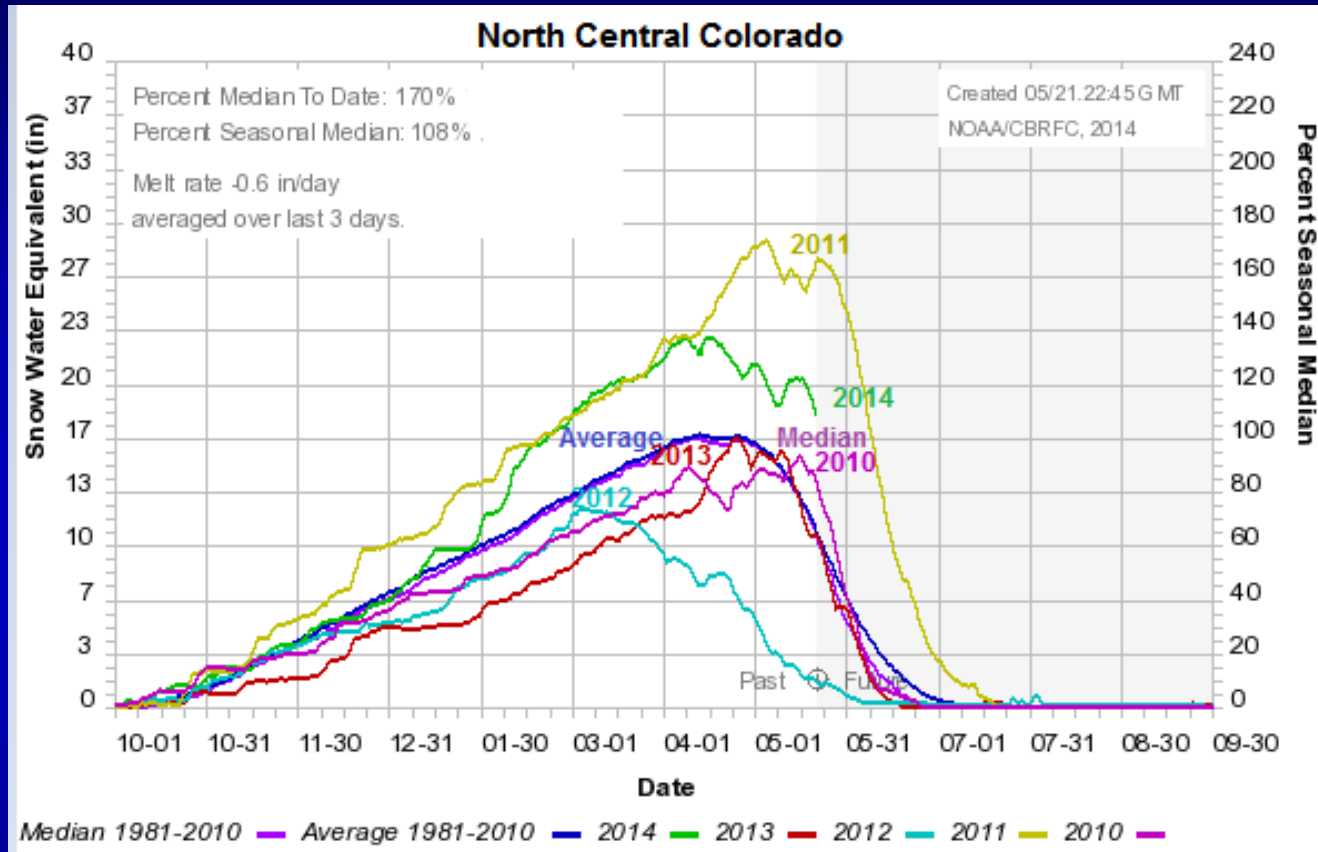


The May 21<sup>st</sup> 2014 snowpack remained above the normal (or median) peak seasonal snowpack values in basins east of the Continental Divide. 2014 was one of 5 years (in the past 35) with the highest May 21<sup>st</sup> snowpack compared to the normal seasonal peak in the South Platte River basin, and one of the top 10 years in the North Platte Basin.



# Mountain Snowpack Timeseries Graph through May 21<sup>st</sup>, 2014

(each line is one of the last 5 years of mountain snowpack)

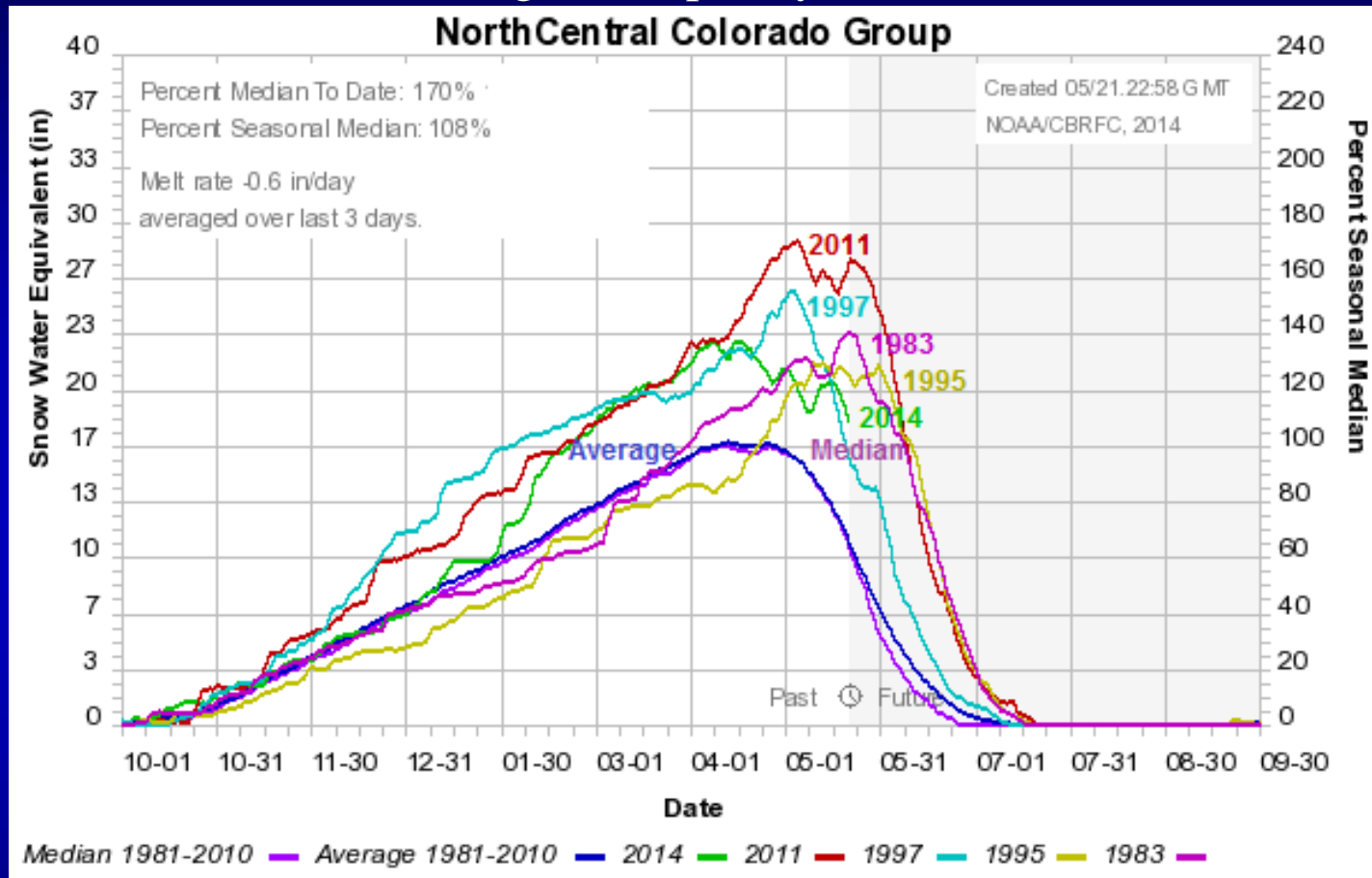


The snowpack has been slowly receding in the upper Colorado River basin but holding fairly steady in the South and North Platte River basins.

\* SNOTEL data for this graph provided by the NRCS.

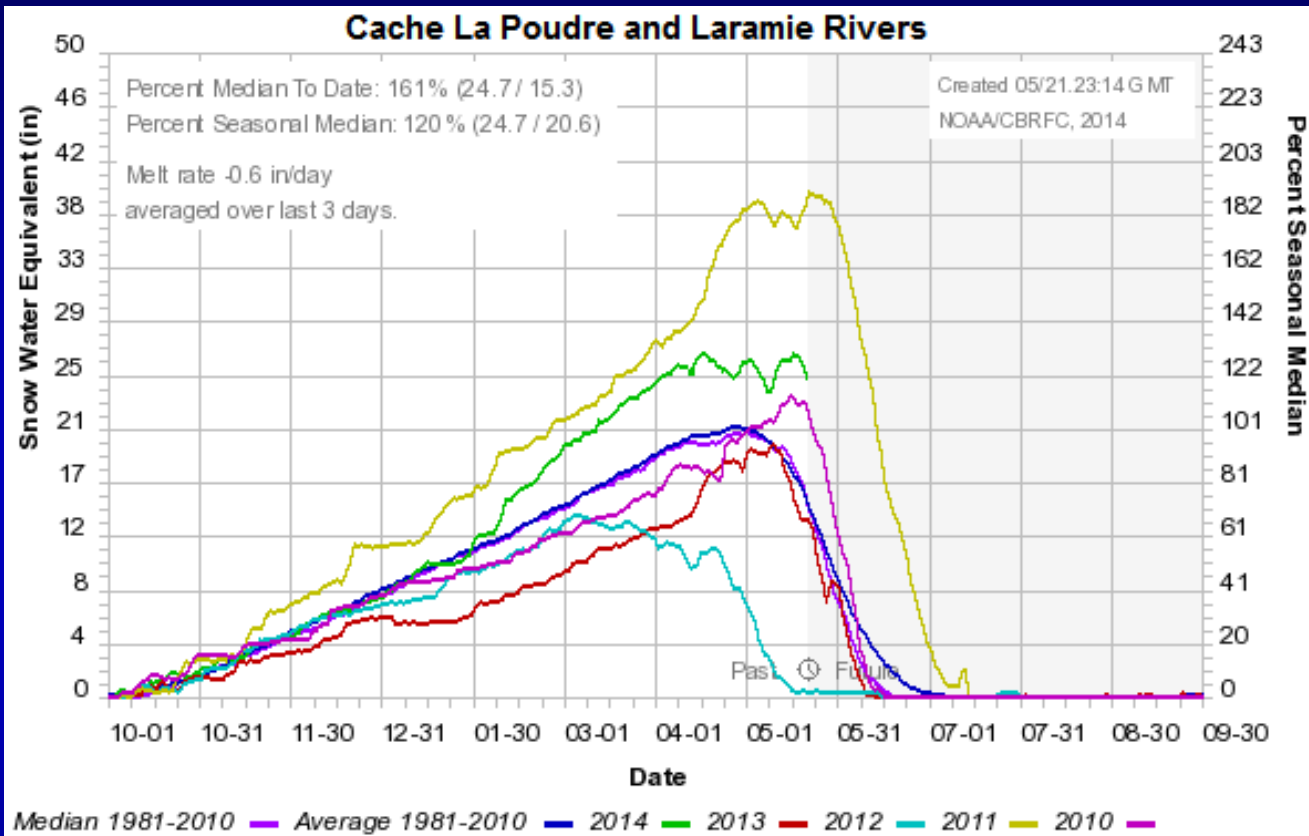
The green line on the time series graph shows the NRCS SNOTEL SWE (snow water equivalent in the snowpack) from October 2013 through late May 2014. The blue/violet lines show the 1981-2010 average/median.

# NC CO Mountain Snowpack Timeseries Graph (5 high snowpack years)

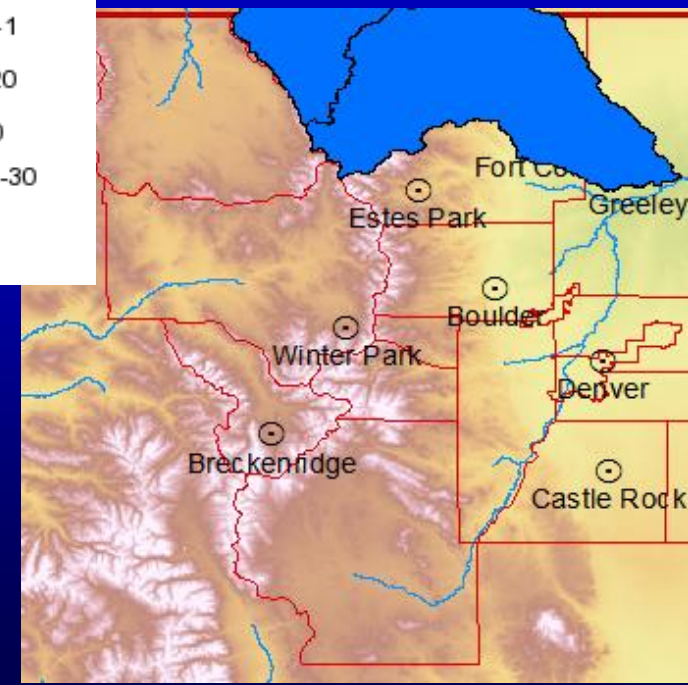


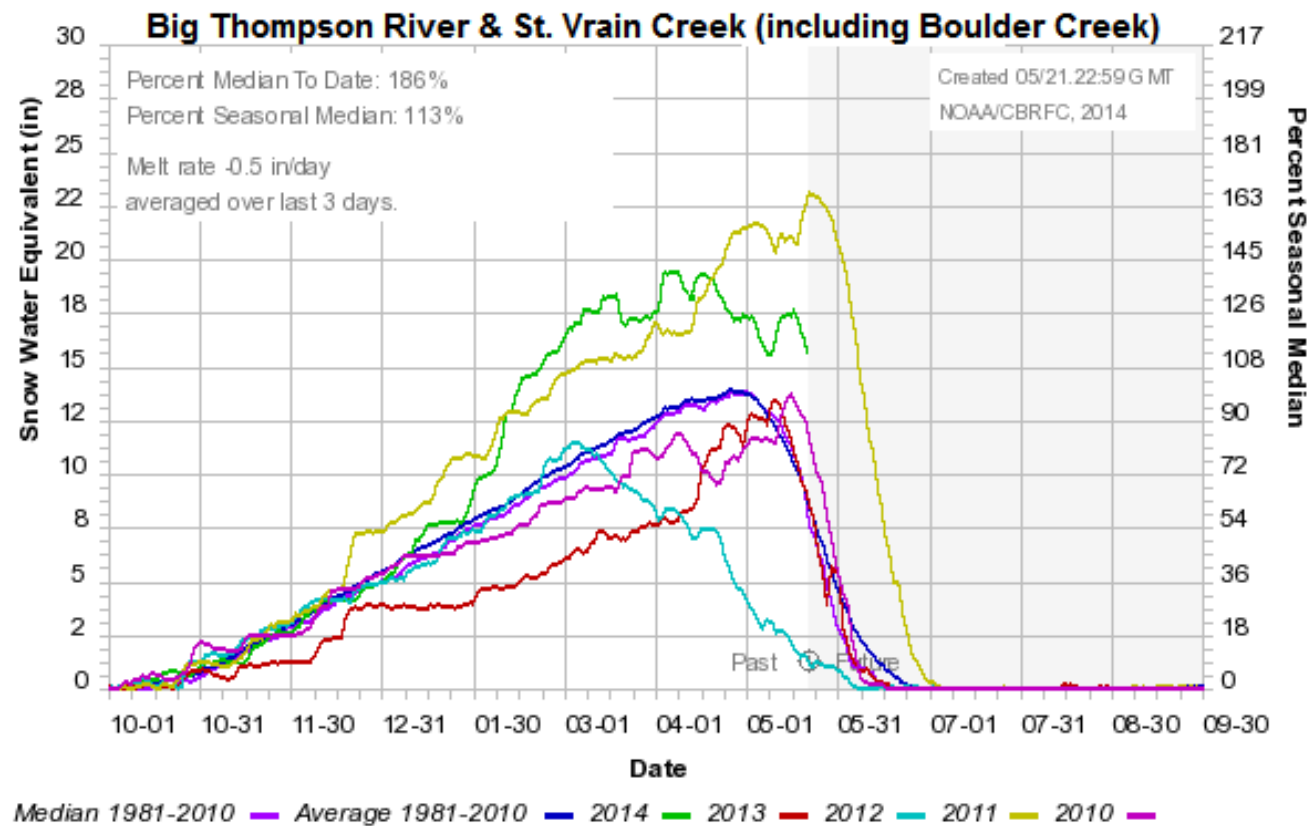
\* SNOTEL data for this graph provided by the NRCS.

The past 5 years are displayed for sub-basins on the next 5 slides. The basins are ordered by highest percent of seasonal normal peak first.

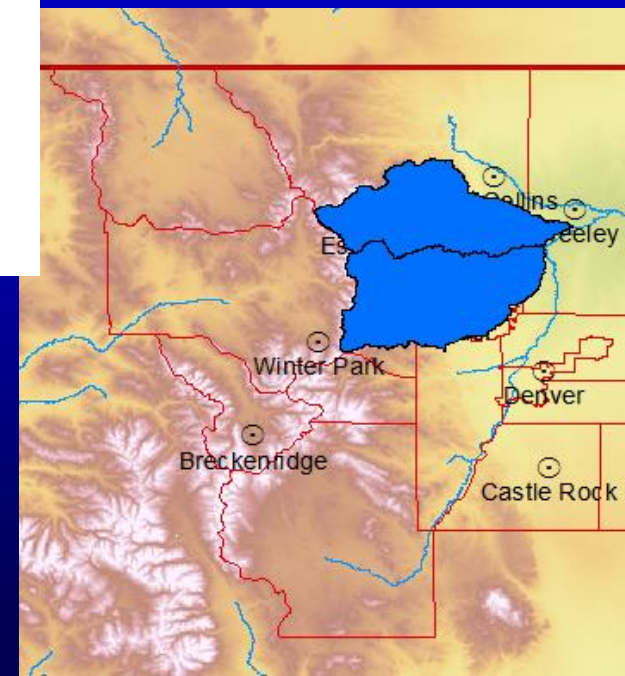


northern Larimer County.

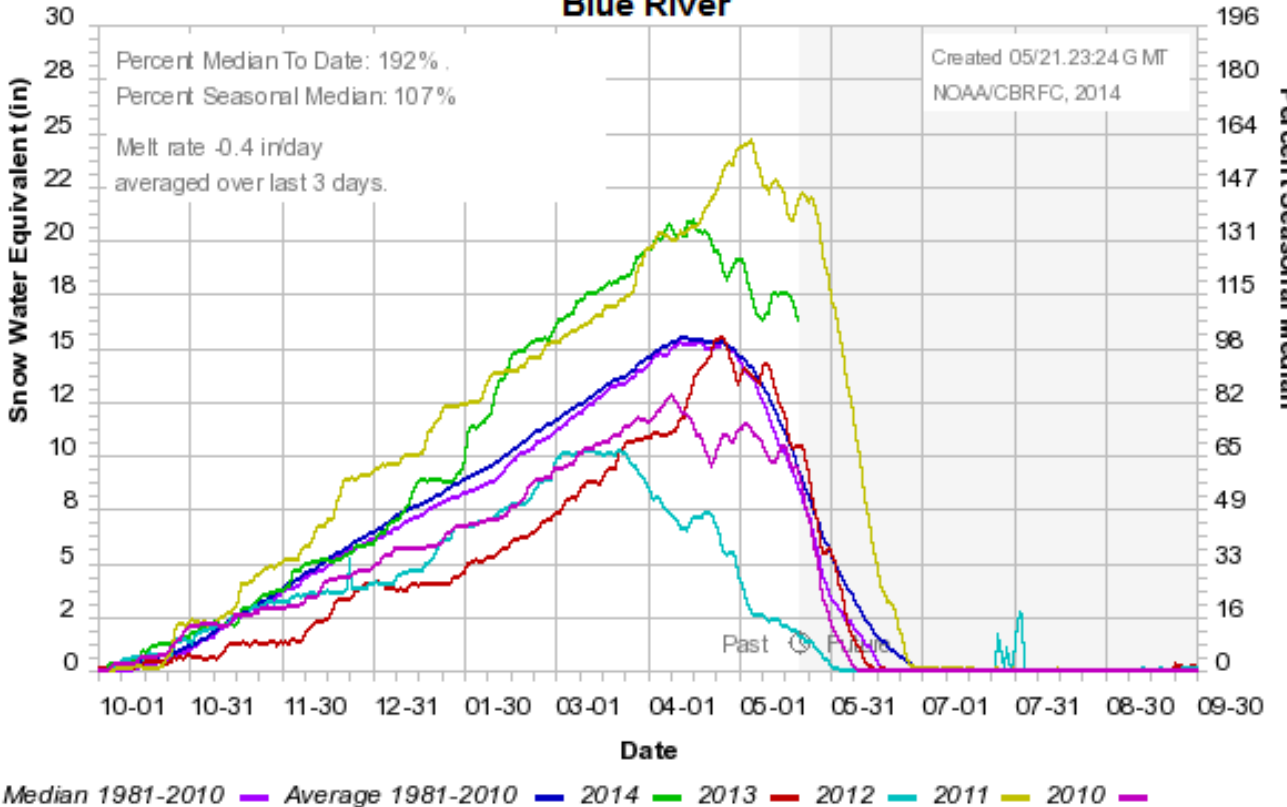




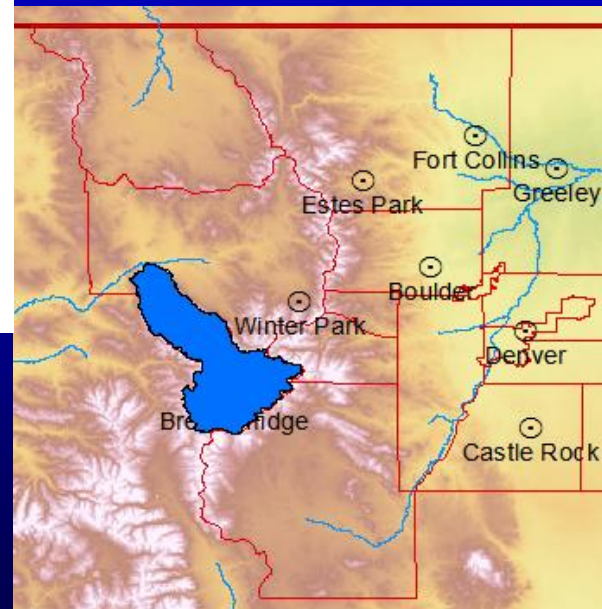
The snowpack in Boulder & southern Larimer Counties remains well above average but below the 2011 snowpack.



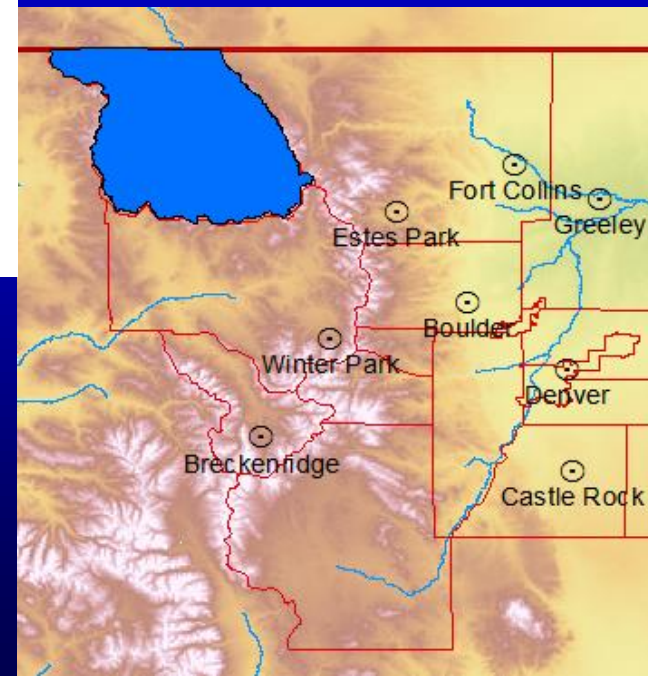
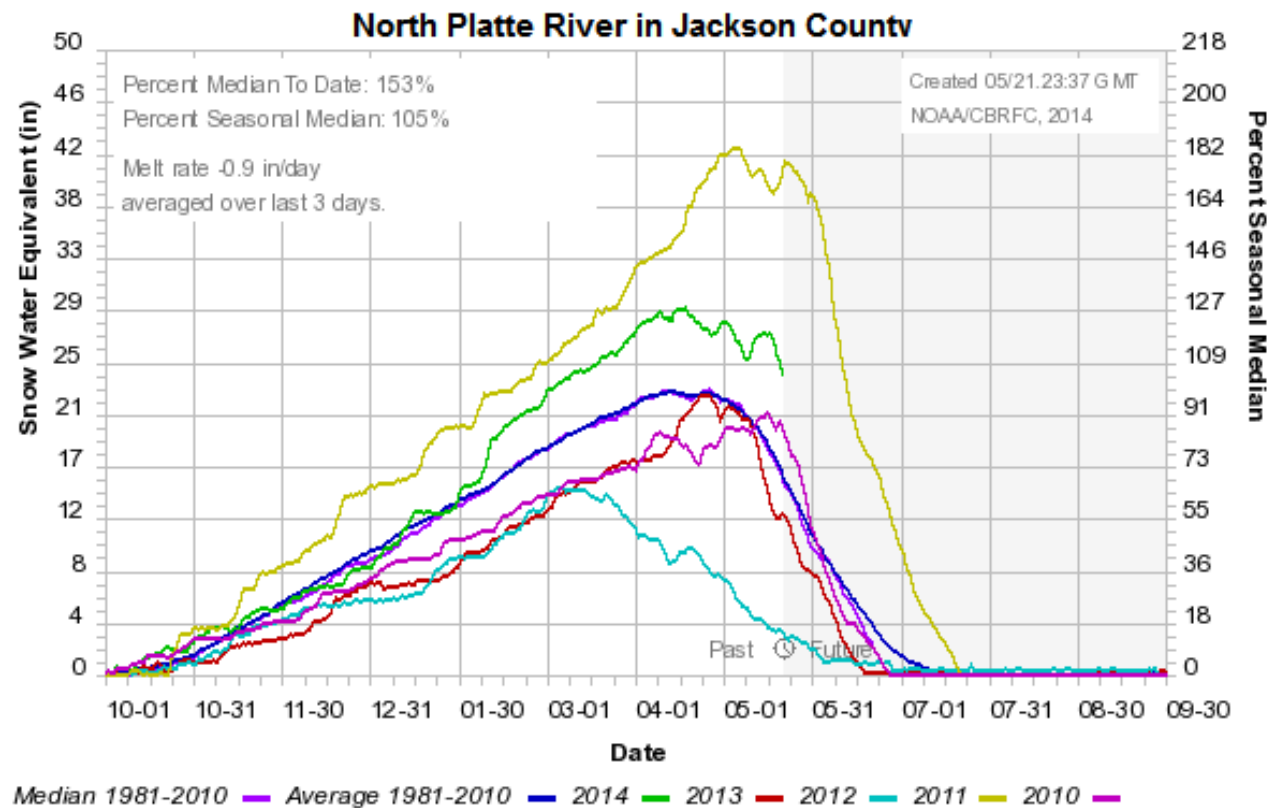
## Blue River



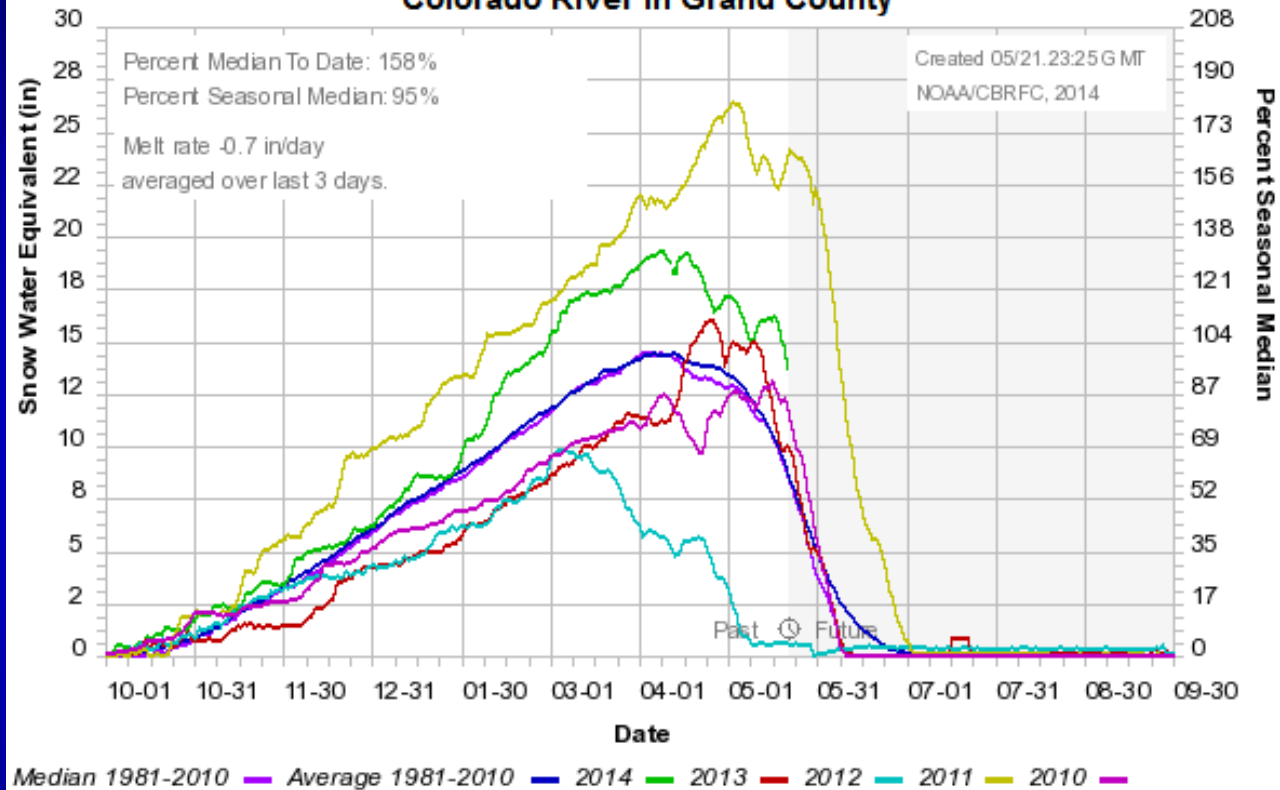
# Summit County



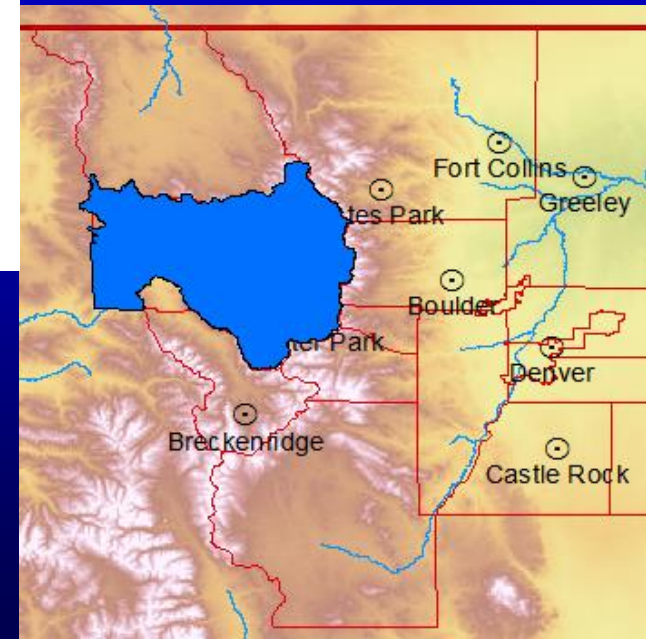
## Jackson County.



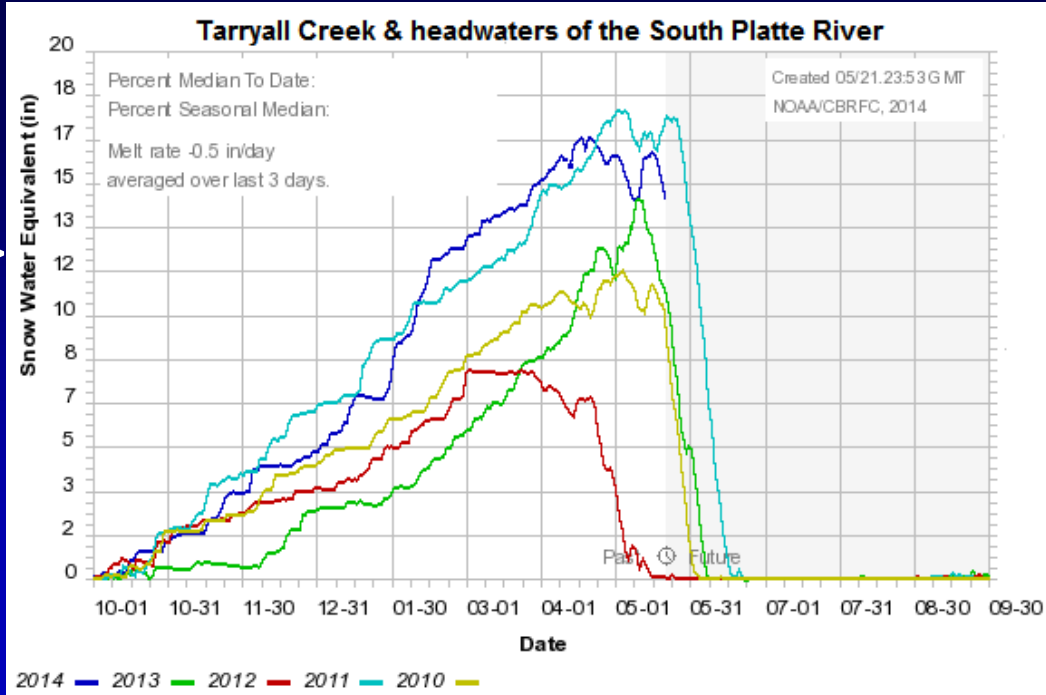
## Colorado Basin River Forecast Center Colorado River in Grand County



Grand County

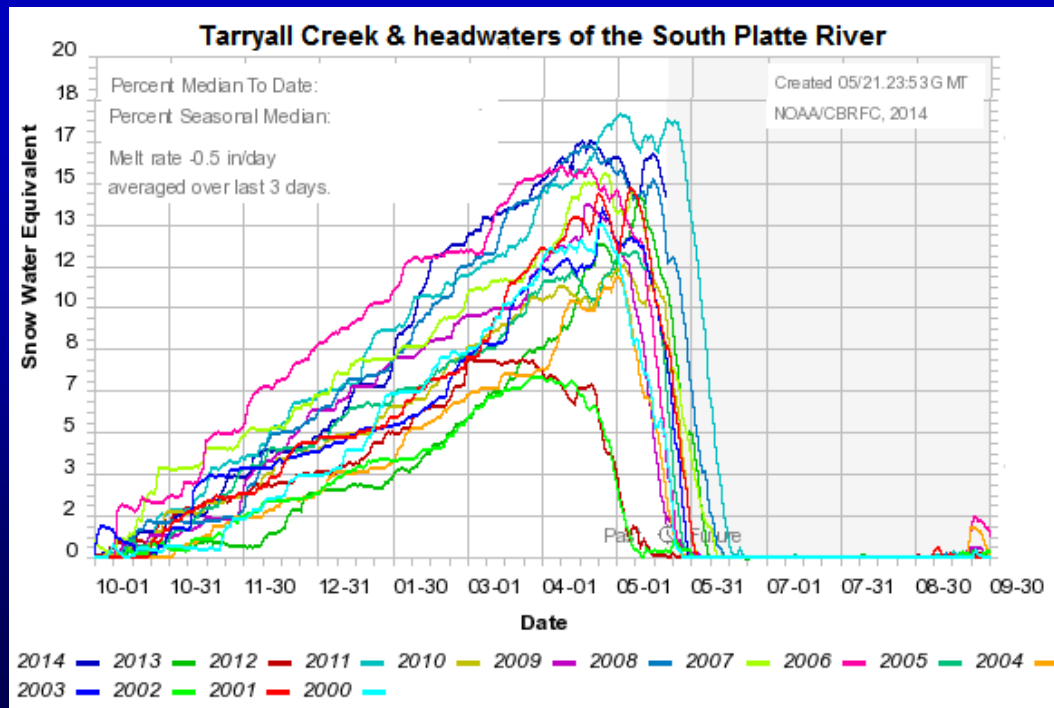


Past 5 years =>

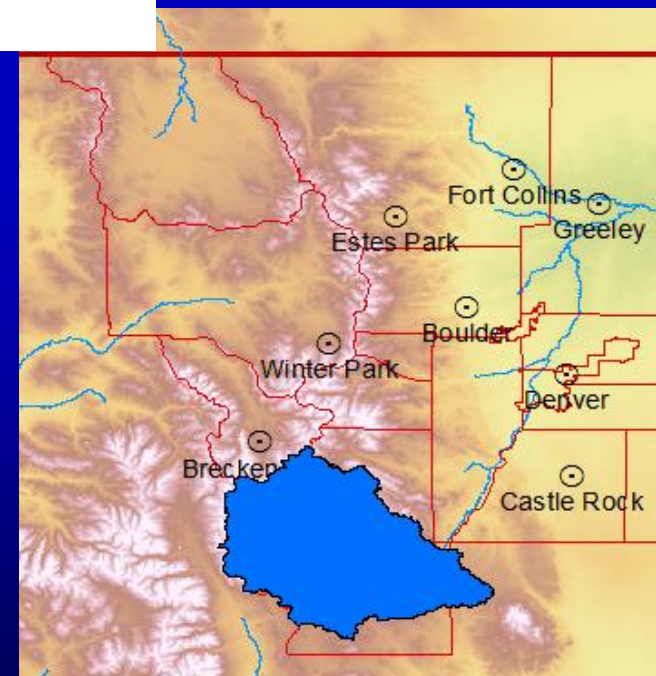


Average/median data was not available for the next 2 slides.

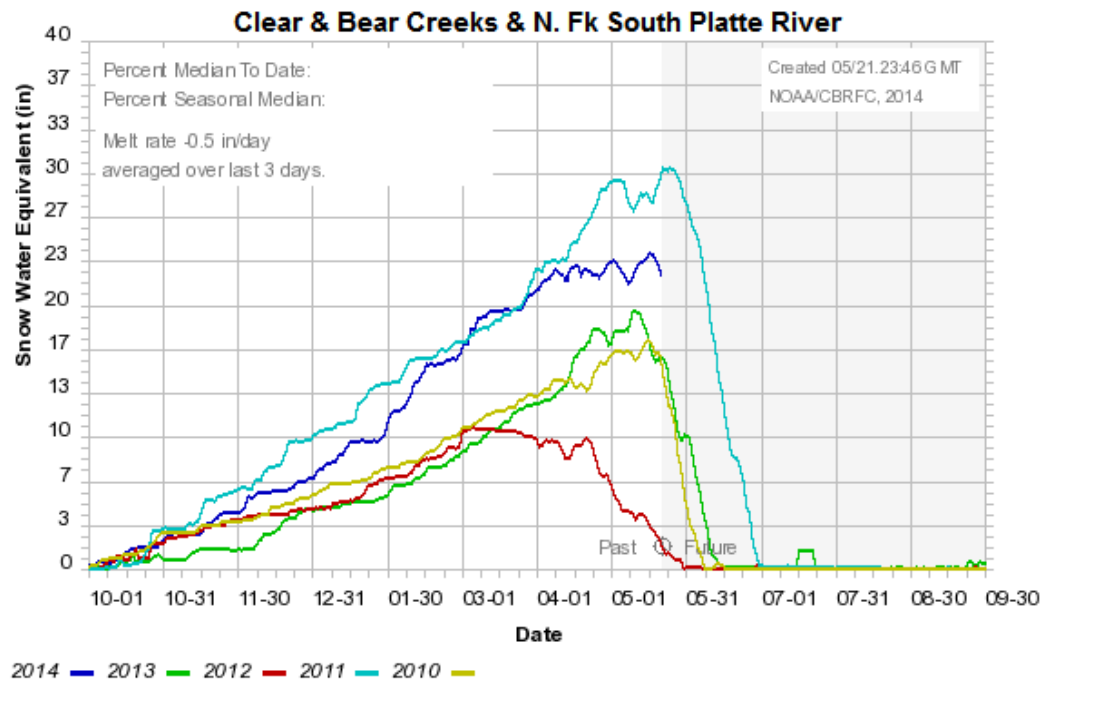
Park County.



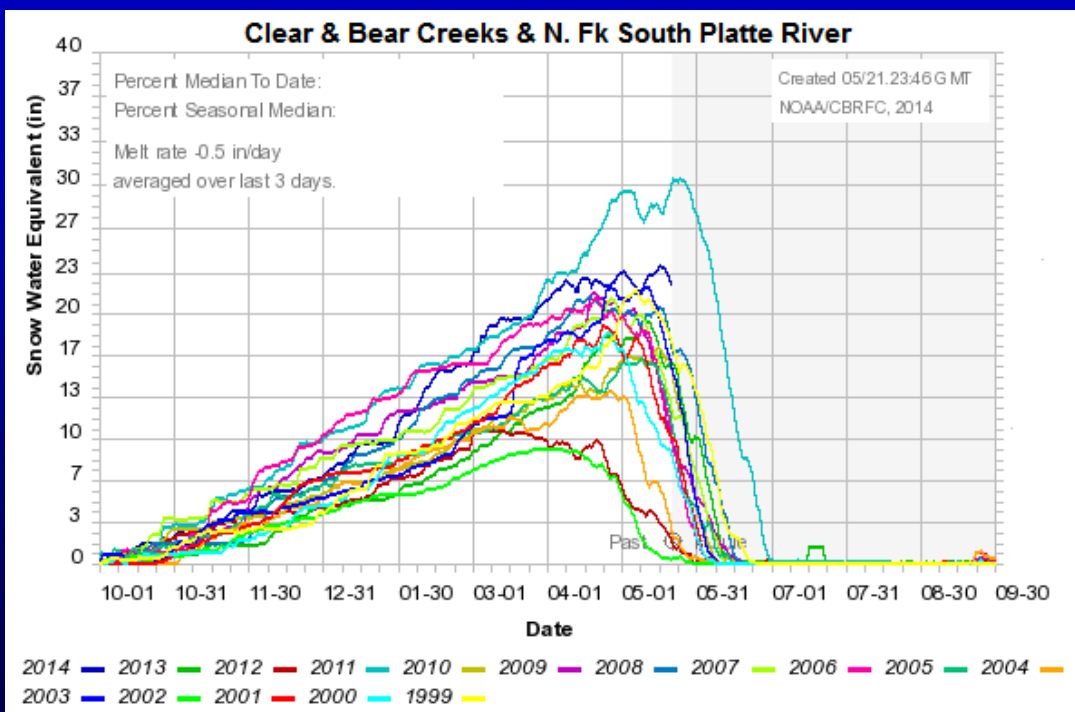
← Past 15 years



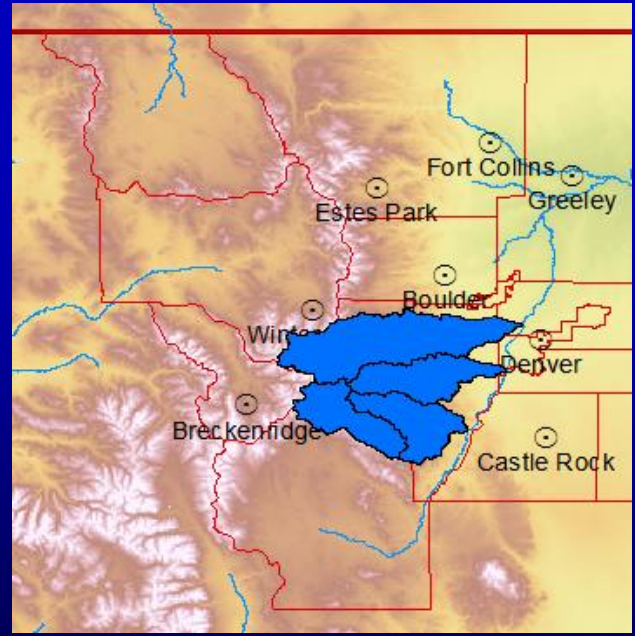
Past 5 years  
=>



Clear, Jefferson & extreme NE Park Counties.

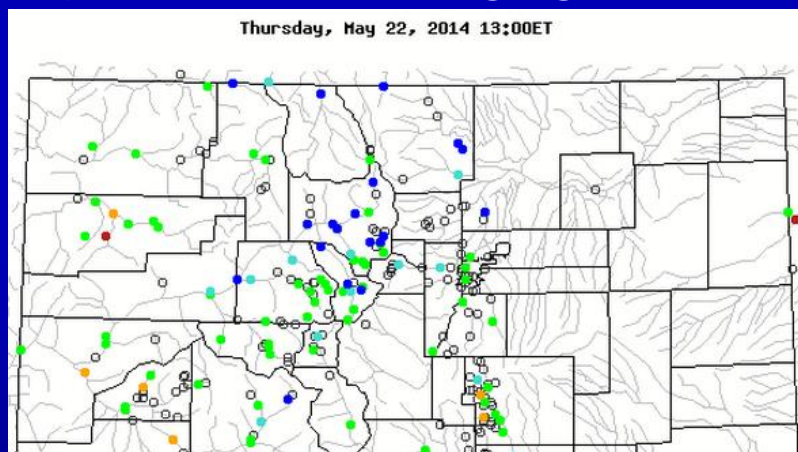


← Past 16 years



# Stream Observations and Forecasts:

- The NC & NE Colorado NWS AHPS webpage is available at <http://water.weather.gov/ahps2/index.php?wfo=bou>. A webpage of NWS current forecast point clickable hydrographs in NC & NE CO is available at [http://www.crh.noaa.gov/bou/?n=bou\\_ahpsmonitor](http://www.crh.noaa.gov/bou/?n=bou_ahpsmonitor).
- The U.S. Geological Survey Colorado clickable real-time streamflow map is available at: <http://waterwatch.usgs.gov/?m=real&r=co>



- The Colorado Division of Water Resources surface water data is available at <http://www.dwr.state.co.us/SurfaceWater/default.aspx>. To go to a basin stream gage table, just click the basin near the top of the webpage.

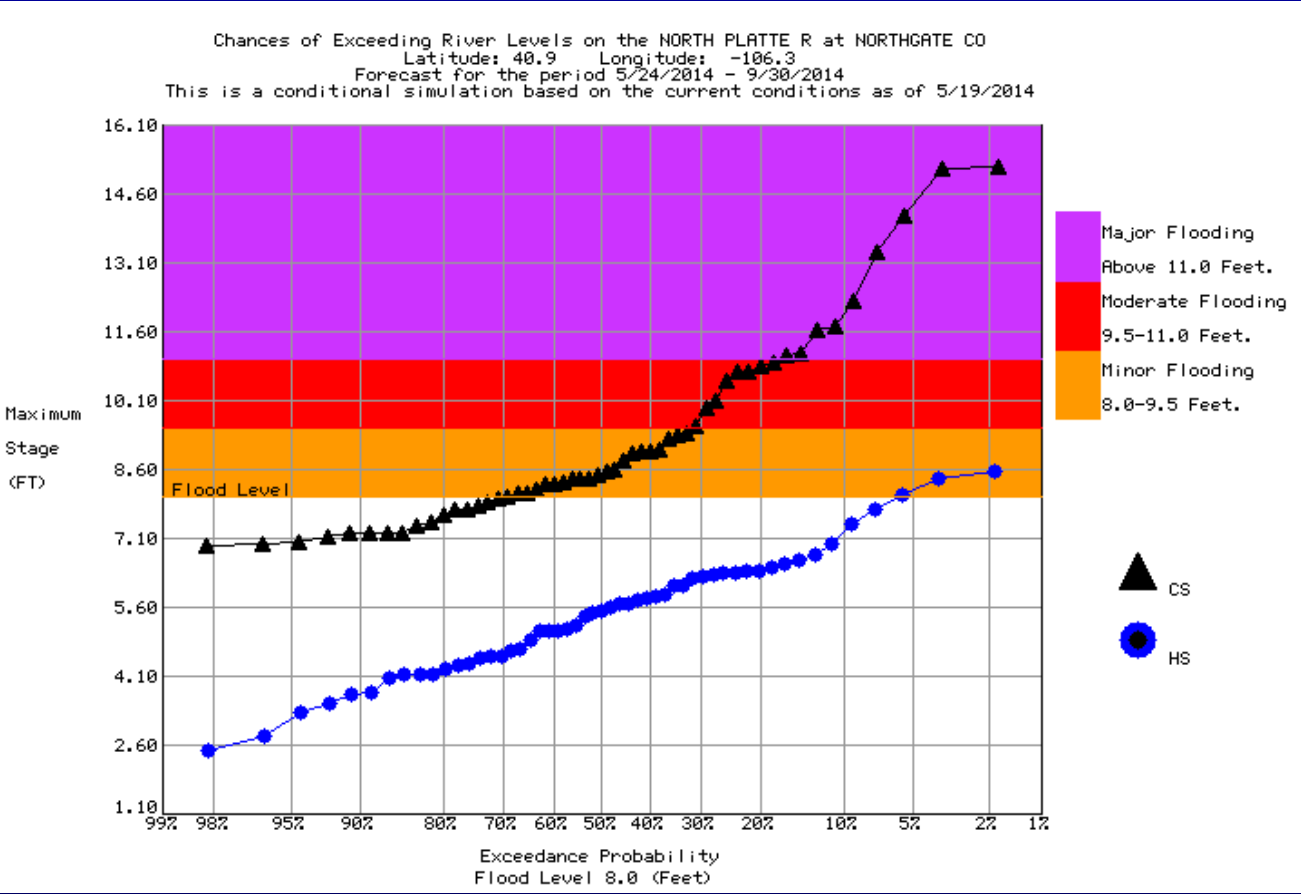
This AHPS probabilistic graph gives the chances of the stage going above various levels during the forecast period (late May through September). The graph shows how the North Platte River at Northgate has a 69% chance of reaching flood stage (8 feet) due to snowmelt runoff. In an 'average' year, the North Platte River at Northgate has a 6% chance of reaching flood stage. It has a 31% chance of moderate flooding this year, compared with less than a 5% chance in an 'average' year.

▲ CS = Conditional Simulation

- The conditional simulation (CS) line indicates chances of the river going above given levels based on current conditions.

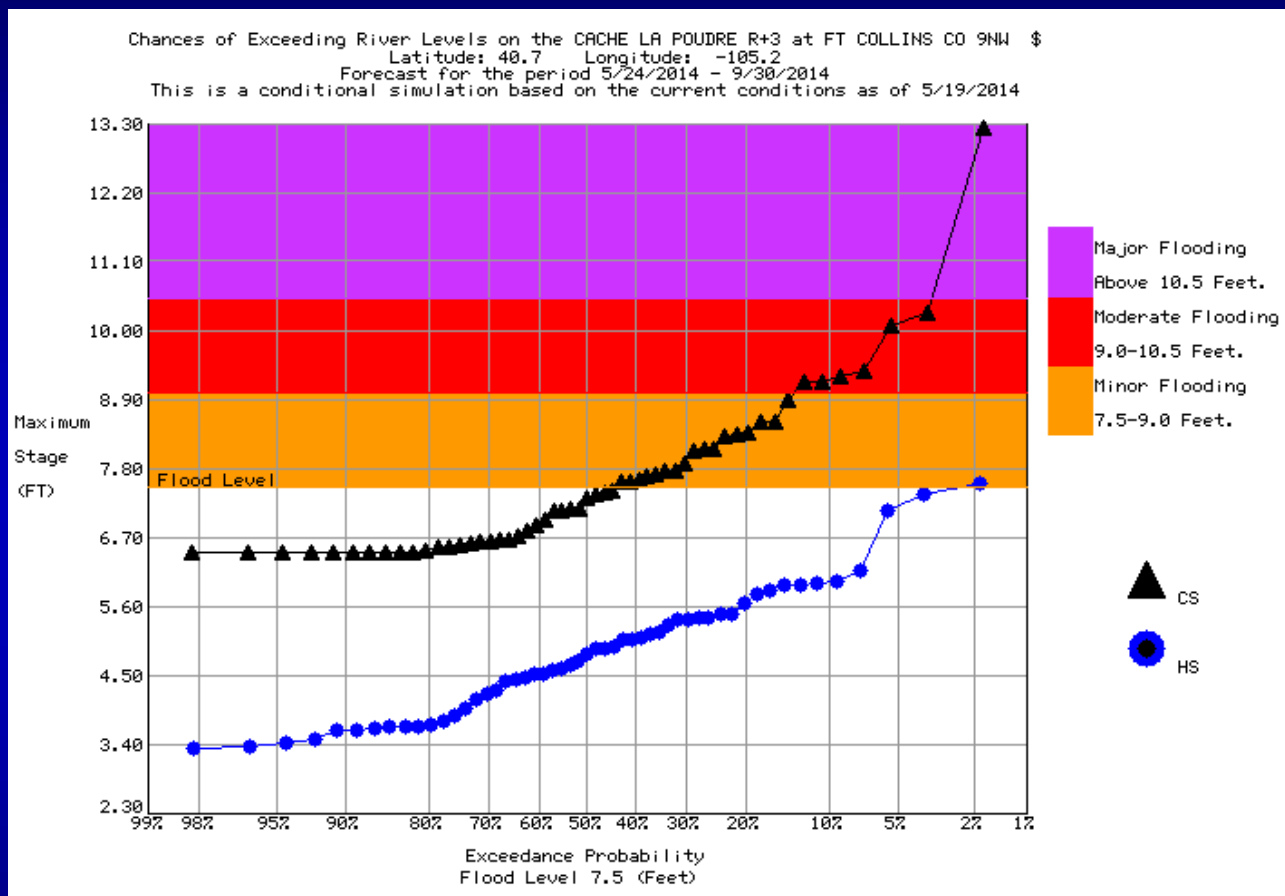
● HS = Historical Simulation

- The historical simulation (HS) line indicates the chances of the river going above given levels based on the total range of past levels.



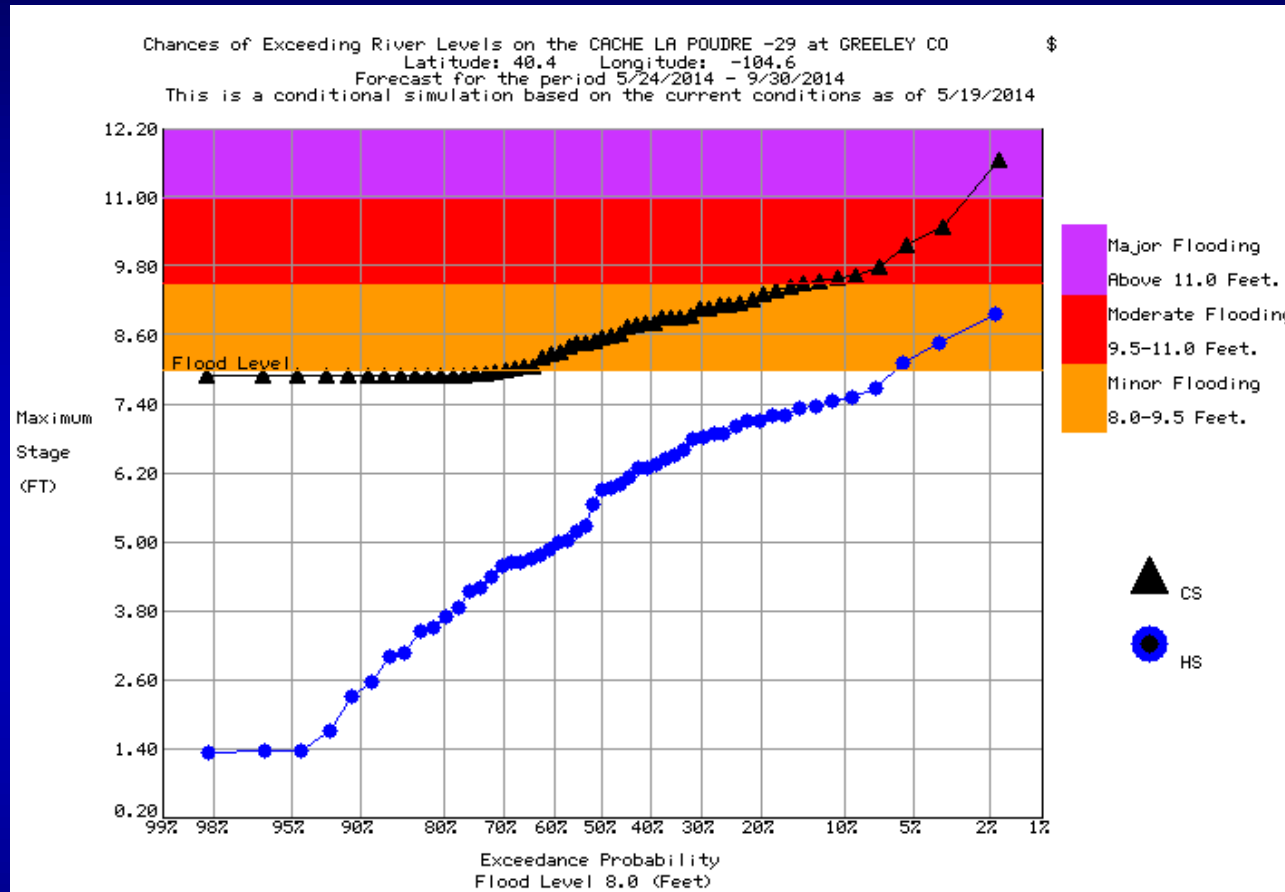
The Northgate forecast point is in northern Jackson County in extreme NC Colorado.

The Cache La Poudre River at the canyon mouth 9 miles northwest of Fort Collins has a 44% chance of reaching flood stage (7.5 feet) due to snowmelt runoff. In an 'average' year, it has less than a 5% chance of reaching flood stage.



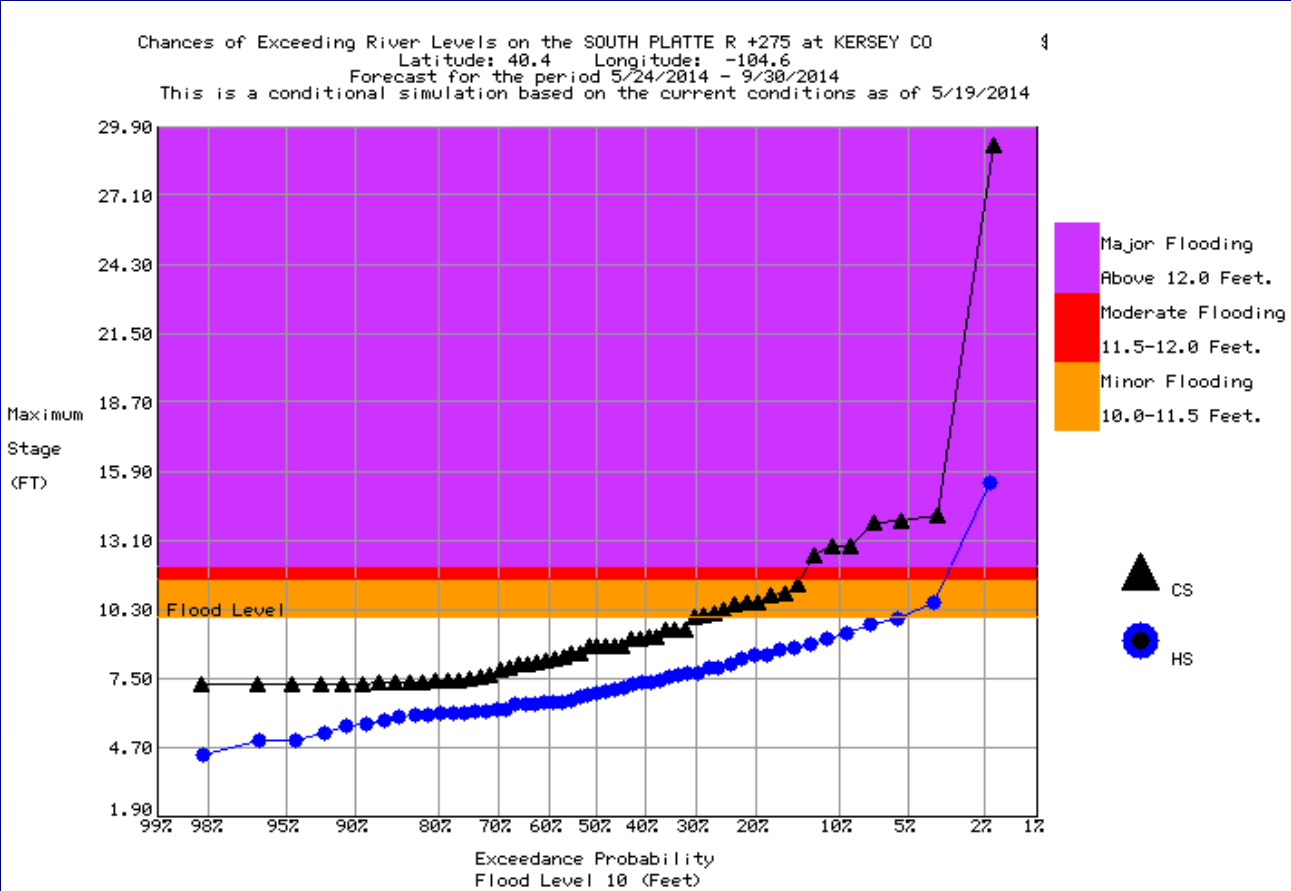
Graphics of probabilistic river outlooks can be found on the AHPS website at <http://water.weather.gov/ahps2/>. The probabilistic forecast points are marked by circles on the AHPS map. The probabilistic outlook graphics are accessible by clicking the tabs above the forecast point's hydrograph.

Downstream: the Cache La Poudre River near Greeley has a 68% chance of reaching flood stage (8 feet) due to snowmelt runoff. In an 'average' year, it has a 6% chance of reaching flood stage.

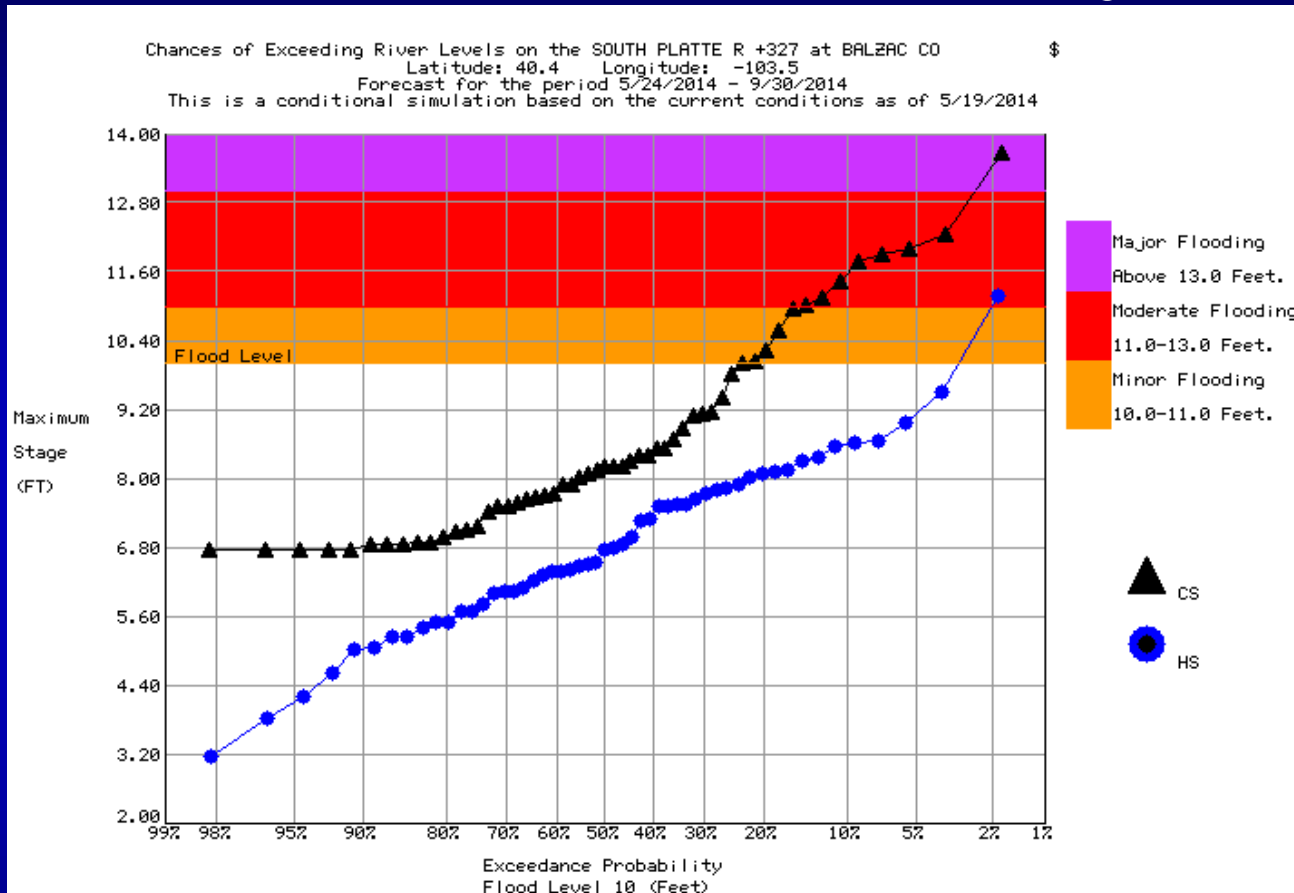


You can also view the weekly chance of exceeding levels graph which give the probability that the maximum stage will exceed a particular value each week through September. These graphs are also available at forecast points marked by circles on the <http://water.weather.gov/ahps2/> website on the tabs above the forecast point's hydrograph.

The next forecast point downstream: the South Platte River at Kersey has a 30% chance of reaching flood stage (10 feet) due to snowmelt runoff. In an ‘average’ year, the South Platte River at Kersey has a 5% chance of reaching flood stage.



Farther downstream: the South Platte River near Balzac has a 23% chance of reaching flood stage (10 feet) due to snowmelt runoff. In an 'average' year, the South Platte River near Balzac has less than a 5% chance of reaching flood stage.



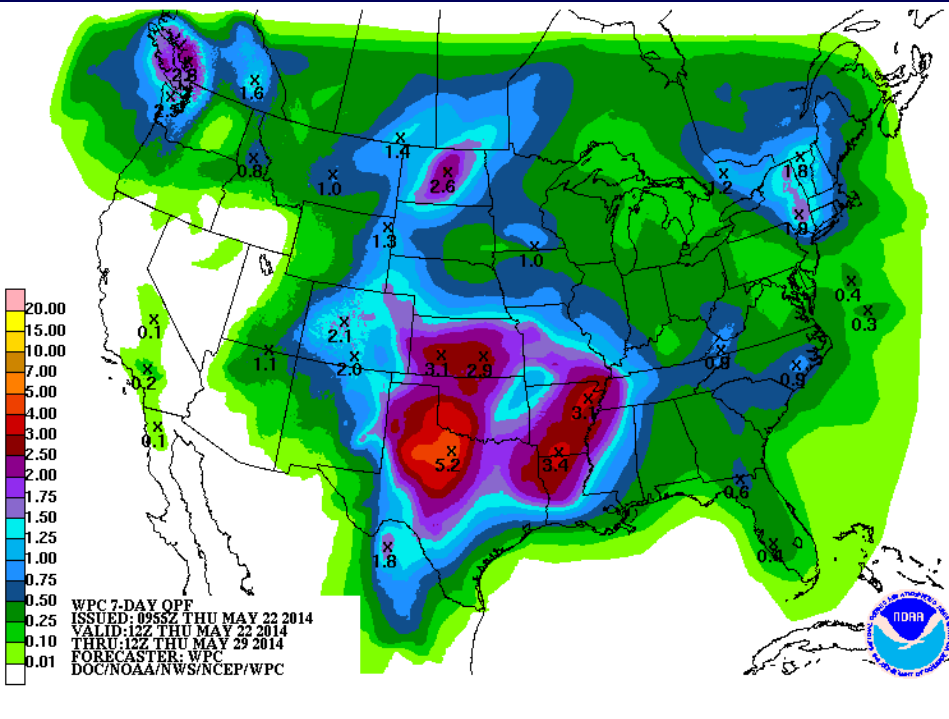
Other probabilistic forecast points (round circles on the AHPS map) in NC & NE Colorado have a 15 percent chance or less of reaching flood stage due to snowmelt runoff alone.

## **Some Factors than impact runoff:**

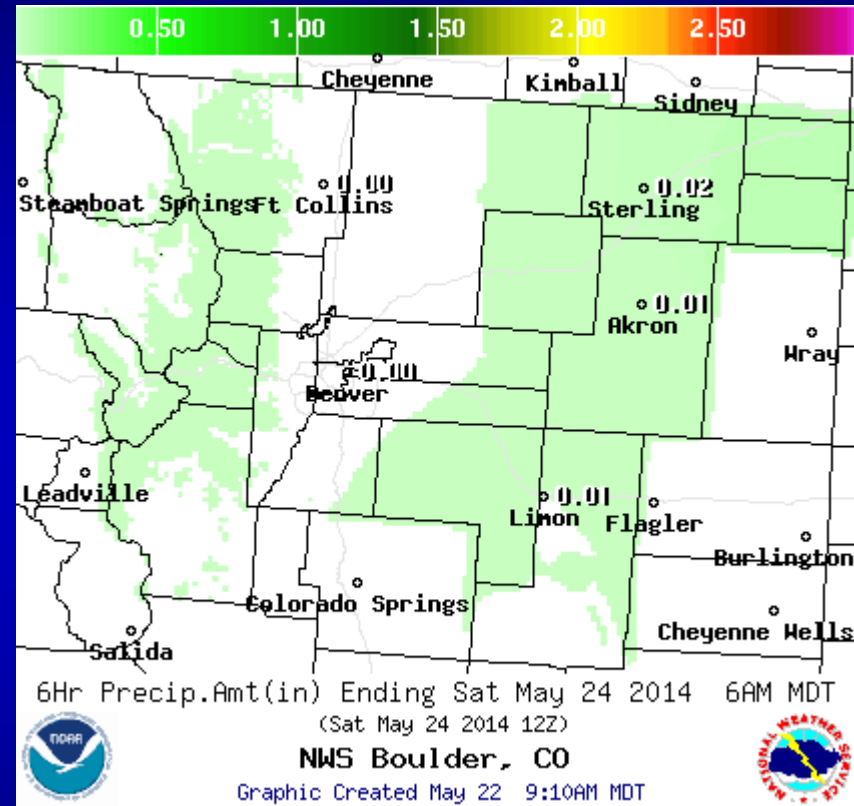
- Future snowfall
- Future rainfall amounts and timing
- Whether rain (especially a warm rain) falls on the snowpack
- When and how fast the snow melts (freezing and thawing in the mountains)
- Stream levels during the melt
- Groundwater/soil moisture
- Dry winds

# Precipitation Forecasts:

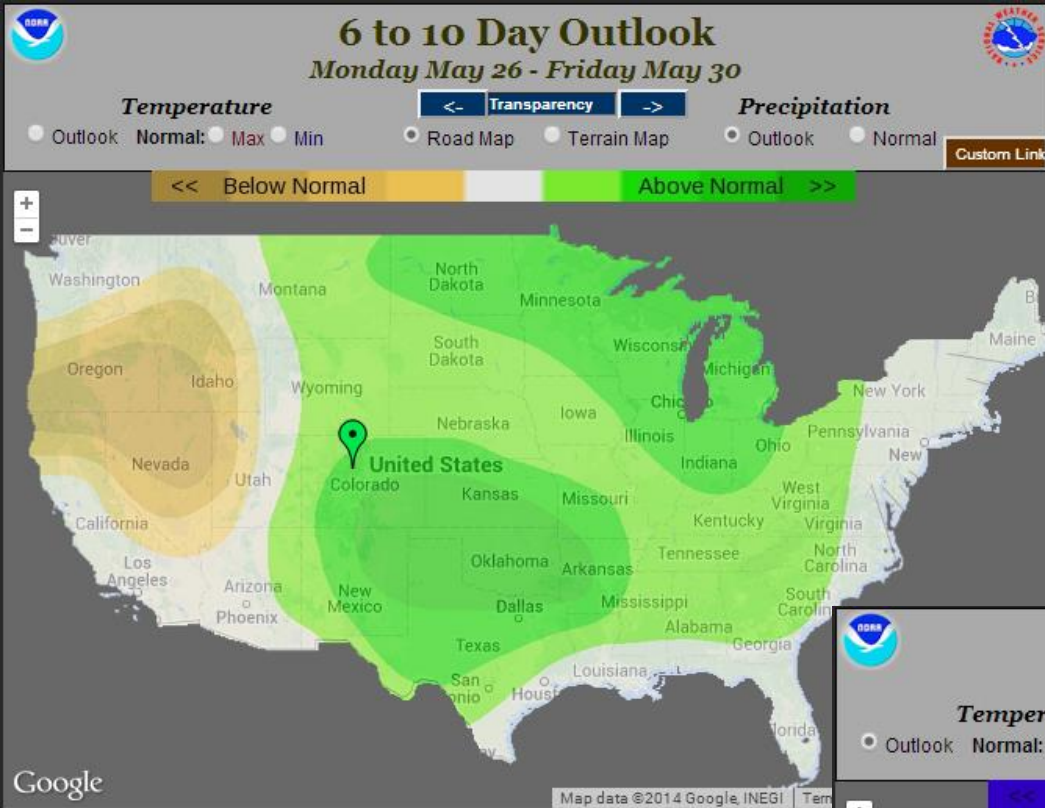
<- Example of 7 day U.S. precipitation forecast.



Click the map above to link to 1-7 day NWS U.S. precipitation forecasts.

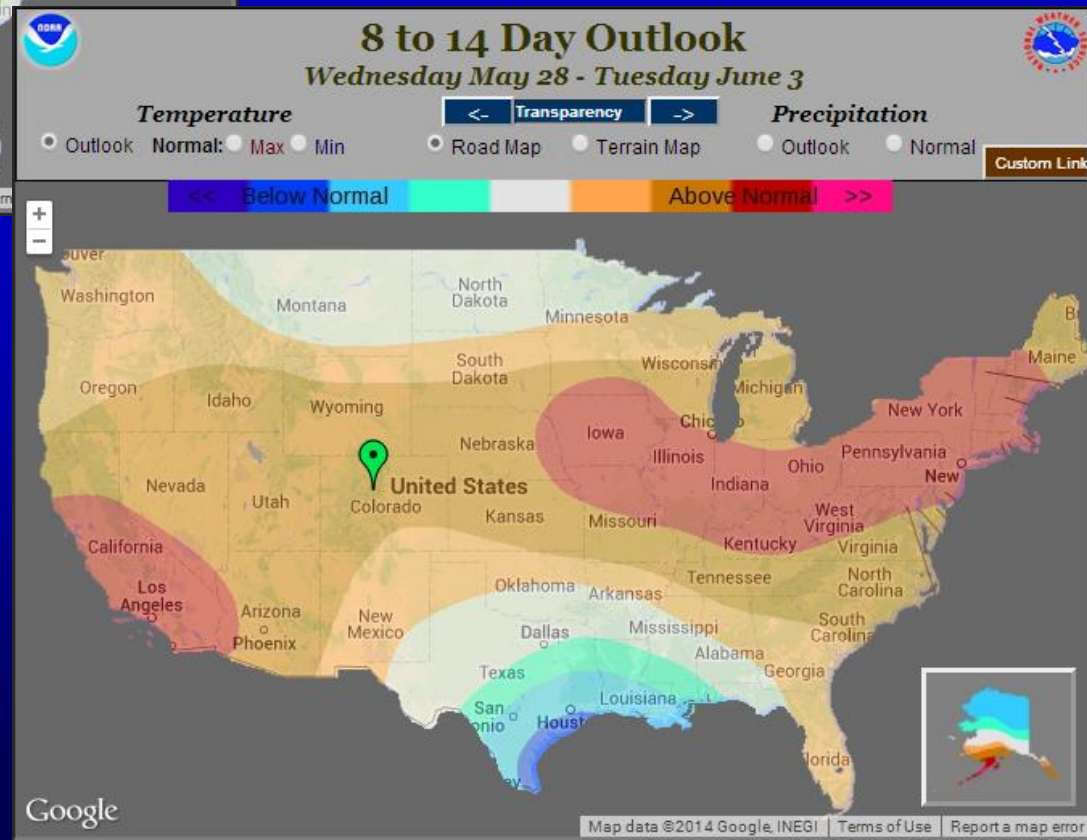


Click the map above to link to the NWS NC & NE Colorado precipitation forecast loop (change forecast element to 'Amount of Precip').

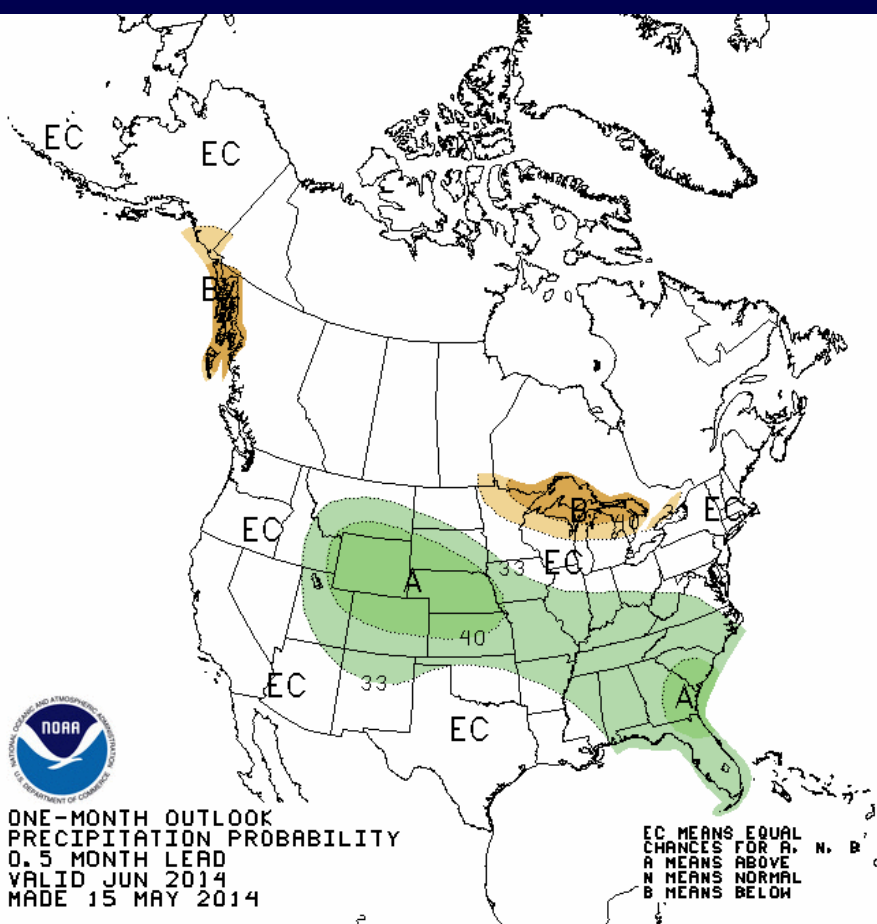


# Precipitation & Temperature Outlooks:

Click the map on the top left for the CPC 6 to 10 day outlooks or the map on the bottom right for the 8 to 14 day outlooks.



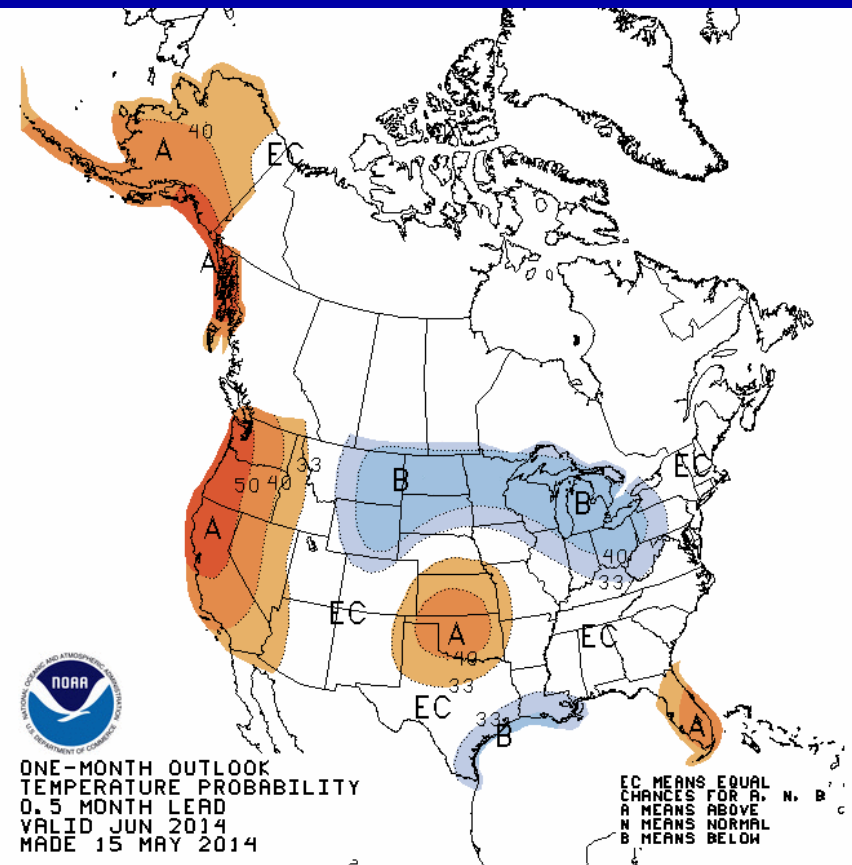
[Click here for more NWS Climate Prediction Center \(CPC\) Outlooks](#)



## June Precipitation Outlook

[Click here for more NWS  
Climate Prediction Center  
\(CPC\) Outlooks](#)

The CPC outlook for June calls for  
above average precipitation.



## June Temperature Outlook